

NASA SpacePlace

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News and Notes for formal and informal educators

The Space Place is a NASA website for elementary school-aged kids, their teachers, and their parents.

It's colorful!
It's dynamic!
It's fun!

It's rich with science, technology, engineering, and math content!

It's informal.
It's meaty.
It's easy to read and understand.
It's also in Spanish.
And it's free!

It has 130 (and counting) separate modules for kids, including hands-on projects, interactive games, animated cartoons, and amazing facts about space and Earth science and technology.

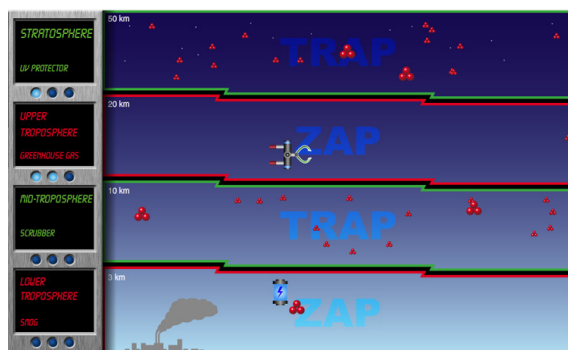
Earth Science Week is October 10-16. You will find copious Earth-science-related resources on both The Space Place and its sister websites, SciJinks (scijinks.gov) and Climate Kids (climate.nasa.gov/kids). In this issue, we describe a few of these resources, but you will also want to go exploring on your own.

New on spaceplace.nasa.gov . . .

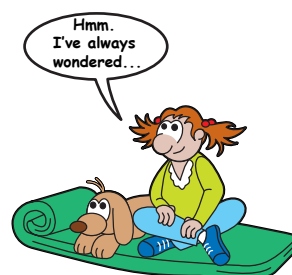
Earth science is exceedingly complex. It is not a single "science," of course, but many disciplines applied to understanding the relationships of events and conditions on our planet. Nothing seems to be black or white. Nothing is all good or all bad all the time. Helping young students begin to understand such nuances is a challenge.

One of those tricky concepts is the fickle role of ozone. Ozone is either "good" or "bad," depending on where it's hanging out in the atmosphere. Close to the ground—it's harmful. A little higher, in the mid-troposphere—it helps scrub pollutants out of the air. Higher still at the top of the troposphere—it's a troublesome greenhouse gas. And high up in the stratosphere—it protects us from harmful UV radiation.

After playing the "Ozone Trap-n-Zap" game on The Space Place, you and your



students are not likely to forget these mercurial roles of ozone. Read about ozone and play Ozone Trap-n-Zap at <http://tiny.cc/ozone-zap>. The article and game are also available in Spanish at <http://tiny.cc/ozone-sp>.



Spotlight on questioning (and getting good answers)

Go on, ask us anything. We will put your questions and our answers on the new "Ask The Space Place" page. Via our page on the website formspring.me, anyone can ask us anything about space exploration, Earth, the solar system, stars, and galaxies—anon-ymously, if desired. When we answer the question, it will also show up on our "Ask the Space Place" page, along with a link to a fun fact, game, or other genre of discovery on our web site. Go to <http://tiny.cc/q-and-a> to see what other questions we've answered, then click on the Formspring link at the bottom to ask your own question. Check back in a day or two for the answer.

For the Classroom

Earth Science Week is a great time to learn about clouds. We have three cloud posters you can download and print on an oversize printer—if you are lucky enough to have one—or take to your local print services store. At <http://tiny.cc/cloud-poster>, all

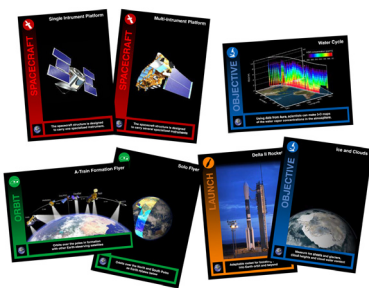
three posters identify cloud types by altitude. Articles and activities on the back explore Earth's water cycle.



The Space Place also has downloadable, printable, high-resolution images with simple captions in large fonts for displaying in your classroom. Go to <http://tiny.cc/images-gallery> and check out the Earth collection.

For after school

"Missions to Planet Earth" is a different sort of computer game. As our "Wild Weather Adventure" game is an online board game, Missions to Planet Earth is an online card game (<http://tiny.cc/earth-card-game>). Either of these games is ideal as a fun, enriching activity that reinforces Earth science concepts. While the card game pits one player against the computer, the weather game can accommodate 1 to 4 players.



For the younger set

Not to forget the little brothers and sisters, The Space Place has added a few new coloring pages to its collection at <http://tiny.cc/colorbook>. Little ones can opt for the high-tech online "crayon" app or the low-tech print and do approach using old-fashioned, sweet-smelling wax crayons. For Earth Science Week, apt choices might be "A hot day," "Earth," "Weather Wizard," or "Cloud."



Celebrate Special Days

September 8: International Literacy Day

Celebrate Earth Science Week and Literacy Day both by reading about the "ecosphere" and doing some word find puzzles about air, water, land, and life at <http://tiny.cc/ecosphere>.

September 10: Swap Ideas Day

Swapping ideas is one way to think of the evolution of living things on our planet. Try one idea and see if it works. If not, try another. That's what the "Emoticonstructor" is all about, also conveying the idea of natural or artificial selection. Go to <http://tiny.cc/emoticonstructor>.

September 23: Autumnal Equinox



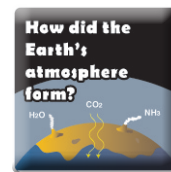
What is an equinox anyway? Or a solstice, for that matter? Find easy explanations and lots of illustrations on our sister SciJinks website at <http://scijinks.gov/solstice>.

October 3, 1970: National Oceanic and Atmospheric Administration (NOAA) founded

NOAA observes and studies weather and other Earthly matters. Solve a "Weather Slider" puzzle or two, unscrambling images of Earth and space weather at <http://tiny.cc/slyder>.

October 6: World Habitat Day

How did Earth become habitable in the first place? One important part of the process was the development of the happy mix of gases in our current atmosphere. Find out how that likely happened at <http://scijinks.gov/atmosphere-formation>.

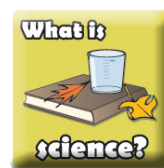


October 10-16: Earth Science Week

All the Earth-related pages on The Space Place are linked at <http://tiny.cc/earth-links>. The whole SciJinks.gov website is about Earth science, with lots of videos and images to supplement your other curriculum for this important week. And don't forget Climate Kids at <http://climate.nasa.gov/kids>.



And other things . . .



Our redesigned SciJinks.gov site has other educator resources, including the Earth-science-related classroom activities articles and guidance for conducting a weather-related science fair project. Go to <http://scijinks.gov/teachers> to explore.